

REMARKS

Review and reconsideration on the merits are requested.

Claims 1-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0 301 557 (EP '557).

EP '557 was cited as disclosing a powder coating composition comprising a thermosetting fluorine-containing resin and optionally, silica as an extender pigment, the thermosetting powder having a particle diameter not exceeding 400 μm . Although acknowledging that EP '557 does not explicitly disclose a particle size for the silica pigment, the Examiner relies on Katz as teaching that silica pigments typically have a particle size of 10-100 nm within the range of less than 1/1000 of the 400 μm upper limit for the powder formulation.

Asserting that the silica of EP '557 would inherently have a particle size meeting the claim limitations, the Examiner considered that it would have been obvious to incorporate such silica pigment into the powder coat composition of EP '557 to arrive at the invention.

Applicants respectfully traverse for the following reasons.

As discussed bridging pages 1-2 of the specification, when a metallic substrate having applied thereon a conventional thermosetting fluorine-resin powder coating composition is exposed outdoor for a long period time, a problem of corrosion and deterioration of the metallic substrate arises mainly due to rust. In order to solve the above-noted problem of the prior art, the present inventors found that by adhering a silicon oxide powder having a specific relation with a fluorine-containing resin powder, a thermosetting fluorine-containing resin powder coating

composition allowing for excellent protection for a substrate, particularly a metallic substrate, is obtained (page 2, lines 2-6 of the specification).

More particularly, the fine powder of silicon oxide is not kneaded into the thermosetting fluorine-containing resin powder, but rather is adhered to the surface of the fluorine-containing resin powder. This feature is described from page 5, line 17 to page 6, line 9 of the specification. Claim 1 has been amended accordingly, and claims 2-7 have been amended to conform to the amendment to claim 1.

The unexpected effects of the adhesion of the silicon oxide fine powder are explained from page 5, line 17 to page 6, line 1, as follows:

...that electric discharging which arises inevitably at coating, particularly at electrostatic coating in case of a fluorine-containing resin having a higher charging property than general-purpose resins can be effectively inhibited by adhering the fine powders of silicon oxide to the surface of the powder particles of coating composition, thereby preventing a pin hole from arising on a coating film and as a result, an ability for protecting a substrate can be enhanced more.

Furthermore, as shown in the comparison of the results of Example 1 (adhered) with Example 4 (kneaded), the weather resistance is remarkably improved when using the same silicon oxide powder having the same particle size (Table 1 at page 13 of the specification).

In EP '557, page 7, lines 5-14, the silica is used as an additive and "These additives can be compounded beforehand with either the component (A) or the component (B)" (the component (A) being a fluorine-containing polymer and the component (B) being a curing agent).

Accordingly, EP '557 does not disclose adhesion of silicon oxide fine powder to the surface of the thermosetting fluorine-containing resin powder, and does not teach the effects of

the adhesion of silicon oxide fine powder. Of course, Katz is silent about the adhesion of silicon oxide fine powder to the surface of the thermosetting fluorine-containing resin powder.

In view of the amendment to claim 1, the above remarks and the test data presented in the specification, it is respectfully submitted that the present invention is patentable over EP '557, and withdrawal of the foregoing rejection under 35 U.S.C. § 103(a) is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-8 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: February 19, 2004